

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Listing of Claims:

What is claimed is:

1. (Original) A transceiver, comprising:

a TX path mixer that up converts a signal to be transmitted, a RX path mixer that down converts a received signal, and a local oscillator having an output providing a mixing frequency for each of said TX and RX mixers;

further comprising a directional coupler comprising an input node coupled to said output of said local oscillator and further comprising a first output node coupled to said TX path mixer and a second output node coupled to said RX path mixer.

2. (Original) A transceiver as in claim 1, wherein the directional coupler acts as an unequal power divider.

3. (Currently Amended) A transceiver as in claim 1, wherein the directional coupler prevents a the TX signal from being reflected back on a the RX signal.

4. (Original) A transceiver as in claim 1, wherein the directional coupler operating frequency range is greater than the output frequency of the local oscillator.

5. (Original) A transceiver as in claim 1, wherein the directional coupler provides an isolation path from the TX path mixer to the RX path mixer.

6. (Original) A transceiver as in claim 1, wherein the directional coupler covers dual bands for dual band single output local oscillator configurations.

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7. (Original) A transceiver as in claim 1, wherein the directional coupler prevents single tone desensitization.

8. (Original) A transceiver as in claim 1, wherein the directional coupler provides higher output power for the RX path mixer.

9. (Original) A transceiver as in claim 1, wherein the directional coupler loss is less than 10 dB.

10. (Currently Amended) A transceiver as in claim 1, wherein a terminated node of the directional coupler provides a 50 ohm load to absorb ~~the~~ reverse power.

11. (Currently Amended) A transceiver as in claim 1, wherein an ~~the~~ isolation path of the directional coupler provides high reverse isolation from a ~~the~~ TX path.

12. (Currently Amended) A transceiver as in claim 1, the directional coupler further comprising an additional node, wherein within the directional coupler, a ~~the~~ reflected signal from the TX path mixer is absorbed by a ~~the~~ matched load coupled to the additional node ~~of the terminated node~~.

13. (Original) A method for generating transceiver signals, comprising:

up converting a signal to be transmitted via a TX path mixer, down converting a received signal via a RX path mixer,

providing a local oscillator having an output providing a mixing frequency for each of said TX and RX mixers;

coupling the output of said local oscillator to an input node of a directional coupler, and

coupling said TX path mixer to a first output node of said directional coupler and

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coupling said RX path mixer to a second output node of said directional coupler.

14. (Original) A method as in claim 13, wherein the directional coupler acts as an unequal power divider.

15. (Currently Amended) A method as in claim 13, wherein the directional coupler prevents a ~~the~~ TX signal from being reflected back on a ~~the~~ RX signal.

16. (Original) A method as in claim 13, wherein the directional coupler provides higher output power for the RX path mixer.

17. (Original) A method as in claim 13, wherein the directional coupler provides an isolation path from the TX path mixer to the RX path mixer.

18. (Currently Amended) A method as in claim 13, wherein an ~~the~~ isolation path of the directional coupler provides high reverse isolation from a ~~the~~ TX path.

19. (New) A device, comprising:

a radio frequency transceiver comprising:

a TX path mixer that up converts a signal to be transmitted; a RX path mixer that down converts a received signal; a local oscillator having an output providing a mixing frequency for each of said TX and RX mixers; and a directional coupler comprising an input node coupled to said output of said local oscillator and further comprising a first output node coupled to said TX path mixer and a second output node coupled to said RX path mixer.

20. (New) A device according to claim 19, the directional coupler further comprising an isolation node, wherein an impedance terminating the isolation node is different from a load impedance of the first output node.

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21. (New) A device according to claim 19, wherein the directional coupler is a multi band directional coupler.

22. (New) A device according to claim 19, further comprising a TX power amplifier for receiving the upconverted signal from the TX path mixer, wherein an output load from the TX power amplifier is not an exact conjugate match to the TX power amplifier output impedance.

23. (New) A device according to claim 19, wherein a TX signal is prevented from being reflected back to a RX signal.

24. (New) A device according to claim 19, wherein the directional coupler is configured to operate in multiple bands.

25. (New) A device according to claim 19, wherein the device comprises a mobile terminal.

26. (New) A device according to claim 19, wherein the device comprises a cellular mobile communication device.

27. (New) A circuit comprising:

a TX path mixer that up converts a signal to be transmitted;

a RX path mixer that down converts a received signal;

a local oscillator having an output providing a mixing frequency for each of said TX and RX mixers; and

a directional coupler comprising an input node coupled to said output of said local oscillator and further comprising a first output node coupled to said TX path mixer and a second

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output node coupled to said RX path mixer.

28. (New) A circuit according to claim 27, the directional coupler further comprising an isolation node and an amplifier coupled to the TX path mixer, the isolation node being electrically connected to circuit ground through an impedance that is substantially matched to an output load impedance of the amplifier coupled to the TX path mixer.

29. (New) A circuit according to claim 28, wherein the isolation node impedance is not exactly matched to the output load impedance of the TX path mixer amplifier.

30. (New) A circuit according to claim 27, wherein the directional coupler acts as an unequal power divider.

31. (New) A circuit according to claim 27, wherein the directional coupler prevents a TX signal from being reflected back on a RX signal.

32. (New) A circuit according to claim 27, wherein the directional coupler operating frequency range is greater than the output frequency of the local oscillator.

33. (New) A circuit according to claim 27, wherein the directional coupler provides an isolation path from the TX path mixer to the RX path mixer.

34. (New) A circuit according to claim 27, wherein the directional coupler is operable over a plurality of frequency bands for multi band single output local oscillator configurations.

35. (New) A circuit according to claim 27, wherein the circuit is embodied in an integrated circuit.

36. (New) A device comprising:

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first means for mixing a first signal with a mixing frequency to up convert the first signal for transmission;

second means for mixing a second signal with the mixing frequency to down convert the second signal that has been received; and

means for generating the mixing frequency; and

means for coupling the mixing frequency to said first and second mixing means, said coupling means providing isolated paths for providing the mixing frequency to the first and second mixing means.

37. (New) A device according to claim 36, wherein the coupling means is comprised of a directional coupler comprising means to prevent a signal from being reflected from said first means for mixing to said second means for mixing.